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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,190	06/06/2001	J. William Whikehart	199-2062 (VGT 0179 PUS)	9108
7590 03/24/2006			EXAMINER	
Artz & Artz, P.C. 28333 Telegraph Road, Suite 250 Southfield, MI 48034			KNOWLIN, THJUAN P	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/876,190	Applicant(s) WHIKEHART ET AL.	
	Examiner Thjuan P. Knowlin	Art Unit 2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on December 23, 2005 has been entered. No claims have been amended. No claims have been cancelled. No claims have been added. Claims 1-8 are still pending in this application, with claims 1, 6, and 8 being independent.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claxton et al (US 6,741,847), in view of Carey et al (US 6,418,327).

4. In regards to claims 1 and 6, Claxton discloses a receiver (See Fig. 1, Fig. 2, receiver 10 and receiver 60) and method for simultaneously processing multiple channels in a broadcast band (See Abstract and col. 2 lines 13-20), said receiver comprising: at least one antenna (See Fig. 1 and antenna 12) for receiving analog RF signals (See col. 3 lines 39-47); a plurality of tunable bandpass filters (See Fig. 1 and BPF 32), each filter for filtering said analog RF signals, each bandpass filter for tuning to a desired frequency signal, thereby defining multiple desired signals (See col. 5 lines 29-52); a summer (See Fig. 7 and summation 180) for summing said multiple desired signals into one summed signal (See col. 9 lines 4-13); a digitizer (See Fig. 7 and

comparator 186) for digitizing said summed signal (See col. 9 lines 14-29); and a digital tuner (See Fig. 14 and digital sub-band tuners (DSBT) 274) capable of simultaneously processing multiple desired signals from said digitized signal (See col. 11 lines 34-47).

Carey, however, discloses a digital tuner that is able to process only the multiple desired signals from said digitized signal, as well as undesired signals (e.g. noise) (See col. 2 lines 43-56, col. 8 lines 10-26, col. 20 lines 52-65, and col. 22 lines 37-47).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to employ this feature within the system as a way of providing a system that allows for a higher reception of desired/wanted signals, while eliminating the undesired/noise signals.

5. In regards to claims 2 and 7, Claxton discloses the receiver, wherein at least two tunable bandpass filters in said plurality of tunable bandpass filters are tuned to the same desired frequency and combine to draw maximum power for reception of said desired frequency (See col. 2 lines 13-27, col. 3-4 lines 63-7, and col. 11 lines 49-63).

6. In regards to claim 3, Claxton discloses the receiver, wherein at least one tunable bandpass filter in said plurality of tunable bandpass filters is tuned to a first desired frequency and another of said tunable bandpass filters in said plurality of tunable bandpass filters is tuned to a second desired frequency that is different than said first desired frequency for simultaneous reception of at least two different desired frequencies (See col. 1-2 lines 64-10 and col. 3 lines 25-47).

7. In regards to claim 4, Claxton discloses the receiver, further comprising an automatic gain controller (See Fig. 4 and resistor R3 and capacitor C1) and an amplifier

(See Fig. 4 and amplifier 82) at the respective output of each of said plurality of bandpass filters (See col. 7 lines 23-33 and col. 7 lines 49-54).

8. In regards to claim 5, Claxton discloses the receiver, further comprising at least one tunable bandpass filter in said plurality of said tunable bandpass filters being tuned to a first desired frequency and another of said tunable bandpass filters in said plurality of said tunable bandpass filters being tuned to a second undesired frequency (See col. 1-2 lines 64-10 and col. 3 lines 25-47); and wherein said automatic gain controller and amplifier at said output of said tunable bandpass filters that is tuned to said undesired frequency is set at a minimum gain for absorbing said undesired frequency and providing additional receiving power for said first desired frequency (See col. 7 lines 23-33 and col. 7 lines 49-54).

9. In regards to claim 8, Claxton discloses all of claim 8 limitations, except a method of receiving a predetermined undesired signal from the broadcast band; filtering said predetermined undesired signal through a second tunable bandpass filter; and absorbing said predetermined undesired signal. Carey, however, does disclose a method of receiving a predetermined undesired signal from the broadcast band; filtering said predetermined undesired signal through a second tunable bandpass filter; and absorbing said predetermined undesired signal (See col. 1 lines 47-50 and col. 13-14 lines 63-1).

Response to Arguments

10. Applicant's arguments filed 12/23/05 have been fully considered but they are not persuasive. Applicants argue that the Claxton reference does not teach or disclose summing only desired signals, but instead, downconverts all high frequency signals, including desired and undesired signals, to an intermediate frequency, or baseband signal. Applicants state that the teachings of the Claxton reference do not distinguish between desired and undesired signals and therefore cannot possibly suggest selecting only desired signals for summation. Applicants further argue that the Carey reference teaches identifying and summing undesired interference levels in order to compare the sum to a desired signal level, and does not teach or disclose filtering out undesired signals in order to sum and process only desired signals.

11. In regards to the Claxton reference, by reciting in the claims and arguing that only the desired signals are summed, does not make the present invention patentable over the Claxton reference. As stated by Applicants, the Claxton reference sums both desired and undesired signals, which means that a signal could be summed automatically or it could be summed only when wanted/desired. Furthermore, the Claxton reference discloses all limitations, such as a receiver (receiver 10 and receiver 60) and method for simultaneously processing multiple channels in a broadcast band (Abstract and col. 2 lines 13-20), said receiver comprising: at least one antenna (antenna 12) for receiving analog RF signals (col. 3 lines 39-47); a plurality of tunable bandpass filters (BPF 32), each filter for filtering said analog RF signals, each bandpass filter for tuning to a desired frequency signal, thereby defining multiple desired signals

(col. 5 lines 29-52); a summer (summation 180) for summing said multiple desired signals into one summed signal (col. 9 lines 4-13); a digitizer (comparator 186) for digitizing said summed signal (col. 9 lines 14-29); and a digital tuner (digital sub-band tuners (DSBT) 274) capable of simultaneously processing multiple desired signals from said digitized signal (col. 11 lines 34-47).

12. In regards to the Carey reference, the reference does teach and disclose filtering out undesired signals (e.g. noise) in order to sum and process only desired signals (See col. 2 lines 43-56, col. 8 lines 10-26, col. 20 lines 52-65, and col. 22 lines 37-47).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thjuan P. Knowlin whose telephone number is (571) 272-7486. The examiner can normally be reached on Mon-Fri 8:30-5:00pm.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thjuan P. Knowlin



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